

### **Remarks/Arguments**

Claims 1-20 are pending in this Application. In the Office Action mailed May 3, 2005, the Examiner rejected Claims 1-18 under 35 U.S.C. § 103(a) as being unpatentable over a publication by van Dienst, et al., entitled "Calixarenes, chemical chameleons" in view of a publication by Rosokha, et al., entitled "Novel Arene Receptors as Nitric Oxide (NO) Sensors" and rejected Claims 19-20 under 35 U.S.C. § 103(a) as being unpatentable over Rosokha, et al., in view of Batelaan, et al., (U.S. Patent No. 5,434,208).

Applicants respectfully address the basis for the Examiner's rejections below.

#### ***Claims Rejection – 35 U.S.C. § 103(a) – Claims 1-18***

On page three of the Office Action, Claims 1-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over van Dienst et al. in view of Rosokha et al. The Examiner states that van Dienst, et al., "discloses calix[4]arene compounds coupled with at least one NO<sup>+</sup> cation, associated with charge-transfer reactions (being electrophilic, see page 389) that are useable both as sensors as in claims 1-10 (page 387) or for purifying chemical compounds or fluids containing such as in claims 11-18 by facilitated membrane transport (see introduction on page 387 and page 390 concerning cyclodextrins)." The Examiner then states that van Dienst does not require "that the NO<sub>x</sub> cation forms a complex" as claimed in Applicant's independent Claims 1, 11, 15, and 16. Applicant's agree with the Examiner that van Dienst does not suggest or teach a calix[4]arene compound that forms a complex with NO<sub>x</sub> cation. The Examiner then states, "Rosokha teaches such at the first paragraph of page 5620. It would have been obvious to one of ordinary skill in the art to have considered the device of [van] Dienst to inherently contain NO<sub>x</sub> complexes, since Rosokha teach that formation of complexes is a result of kinetic and thermodynamic forces acting on the calixarenes and the NO cations." Applicant respectfully disagrees with such a statement and points to the fact that Rosokha, et al., does not teach or suggest the formation of complexes of calix[4]arene compounds and NO cations derived from NO<sub>x</sub>. Rather, Rosokha, et al., discloses formation of a complex derived from a calixarene and nitric oxide that forms a stable NO complex (pg 5621, Col. 1, 1<sup>st</sup> complete paragraph) or, alternatively, formation of a complex derived from calixarene and an oxidant and nitric oxide (pg. 5621, Col. 1, last paragraph). Applicant also respectfully submits amended Claims 1, 11, 15 and 16, amended to include "NO<sup>+</sup> is derived from an oxide of nitrogen in a form other than nitric oxide." Amended Claims 1, 11, 15 and 16 and their dependents are not suggested or

disclosed by the combination of van Dienst et al. in view of Rosohka, et al., or either reference alone, because neither van Dienst, et al., Rosohka, et al., or the combination disclose or suggest a calix[4]arene compound that can combine and complex with  $\text{NO}^+$  and wherein  $\text{NO}^+$  is derived from an oxide of nitrogen in a form other than nitric oxide. As stated in the MPEP, omission of an element and retention of its function is an indicia of unobviousness. Applicant submits that Claims 1-18 are not unpatentable over van Dienst, et al. in view of Rosohka, et al., because modifying van Dienst, et al. with Rosohka, et al., fails to teach each and every element of amended Claims 1, 11, 15 and 16 and their dependents and combining the references does not teach Applicant's claimed invention as a whole. There is also no teaching or suggestion in van Dienst, et al., or Rosohka, et al., to modify or combine the references in such a way that would resemble Applicant's claimed invention nor is there any indication of a reasonable expectation of success if such references were to be combined. Accordingly, Applicant respectfully requests entry and allowance of amended Claims 1, 11, 15 and 16 and their dependents, namely Claims 2-10, 12-14 and 17-18.

***Claims Rejection – 35 U.S.C. § 103(a) – Claims 19-20***

On page four of the Office Action, Claims 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosohka, et al., in view of Batelaan, et al. As discussed above, Rosohka, et al., does not teach or suggest each and every element of Claim 19 or Claim 20 nor does Rosohka, et al., teach Applicant's claimed invention as a whole. Applicant also respectfully submits amended Claims 19 and 20, amended to include "wherein the nitrosonium is derived from an oxide of nitrogen in a form other than nitric oxide." Applicant submits that amended Claims 19-20 are not unpatentable over Rosohka, et al., in view of Batelaan et al., because modifying Rosohka, et al., with Batelaan et al., fails to teach each and every element of amended Claims 19-20, such as having nitrosonium derived from an oxide of nitrogen in a form other than nitric oxide. In addition, combining Rosohka, et al., with Batelaan, et al., does not teach Applicant's claimed invention as a whole. Further, there is no teaching or suggestion in Rosohka, et al., or Batelaan, et al., to modify or combine the references in such a way that would resemble Applicant's invention as claimed in amended Claim 19 or Claim 20, nor is there any indication of a reasonable expectation of success if such references were to be combined. Accordingly, Applicant respectfully requests entry and allowance of amended Claims 19-20.

***Specification***

On page two of the Office Action, the Examiner states that the substitute Specification filed on January 12, 2004, has not been entered because it does not conform with 37 C.F.R. § 1.125(b) and (c) and there was no reason for preparation of a substitute Specification. Applicant respectfully submits, as stated in the Preliminary Amendment filed January 9, 2004, a substitute Specification has been provided in order that it conform with the application for patent filed on August 18, 2003. The substitute Specification removes the Brief Description of the Drawings, paragraph [00011], and any reference to a Figure 1 to Figure 11 in the Detailed Description of the Invention in order that the Specification conform with the application for patent filed August 18, 2003. Applicant reiterates that no new matter has been introduced with the substitute Specification filed January 9, 2004. Applicant believes the substitute Specification filed January 9, 2004, is in compliance with 37 C.F.R. § 1.125(b) and (c) and respectfully requests entry of the substitute Specification filed on January 9, 2004.

***Statement of Inventorship***

On page two of the Office Action, Applicant was advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time of invention in order to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a). Applicant respectfully points out that the application referred to herewith currently names a single inventor and not joint inventors. Applicant hereby states that the rights to each invention of the claimed subject matter in the instant application were, at the time of such invention, commonly owned by the Assignee as a consequence of invention assignments from the named inventor.

### Conclusion

In light of the amendments, remarks and arguments presented above, Applicant respectfully submits that the pending and amended claims are in condition for allowance. No new matter is introduced with this Amendment. Accordingly, favorable consideration for and allowance of amended Claims 1, 11, 15, 16, 19 and 20 and original Claims 2-10, 12-14, and 17-18 are respectfully requested.

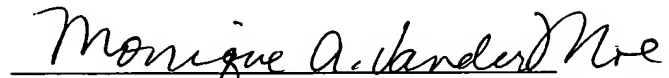
Applicants believes no additional fees are due with this response. If this is incorrect, Applicants hereby authorizes the Commissioner to charge the additional fees, other than the issue fee, that may be required by this paper to Deposit Account 07-0153.

If the Examiner has any questions or comments, or if further clarification is required, it is requested that the Examiner contact the undersigned at the telephone number listed below.

Dated: August 3, 2005

Respectfully submitted,

GARDERE WYNNE SEWELL LLP



Monique A. Vander Molen  
Registration No. 53,716

AGENT FOR APPLICANT

3000 Thanksgiving Tower  
1601 Elm Street  
Dallas, Texas 75201-4761  
(214) 999- 3000 – Telephone  
(214) 999- 3623 – Facsimile